A Case Study on Integrative e-learning Pedagogy for Interactive Teaching

A higher education institution has introduced an integrative e-learning for enhancing teaching and learning. This practice aims to facilitate teachers integrating various e-learning methods to interact with students inside and outside classroom, and to nurture student problem-solving and self-learning anywhere at any time.

Purposes

The purpose of this practice is to enhance our teachers' ability of integrating various e-learning methods to facilitate students interacting with their peers and learning within and outside the classroom, equipping them with problem solving skills and achieving self-learning anywhere at any time.

Background of emerging this good practice

In the information age, students have many opportunities to access online education videos but lack the opportunity of learning how to solve new problems. The explosion of Massive Open Online Courses offered by top overseas universities not only makes information accessible to the public, but also changes the competitive landscape for established physical institutions. To enhance our teachers' ability to take advantage of the opportunities presented by new technology, we conducted a series of workshops with our teachers to assist them to facilitate students interacting with their peers and learning within and outside the classroom, equipping them with problem solving skills and the capacity to undertake self-learning anywhere at any time.

An integrative e-learning model, which makes use of various e-learning tools, transforms the roles of teacher into a learning facilitator. Exploration of innovative teaching pedagogy is the way for both teachers and students to learn differently in the digital world.

Implementation

The implementation model of integrative e-learning pedagogy consists of two types of interactions: 1. Facilitation inside classroom; 2. Consultation outside classroom. Figure 1 shows the interaction cycles involving teacher and e-learning approaches.

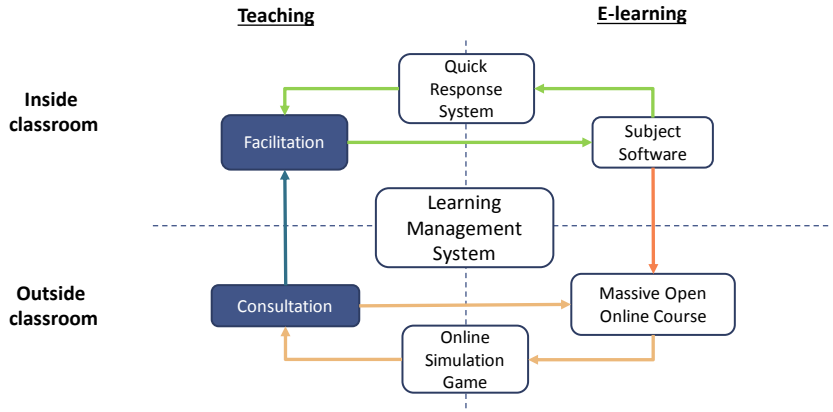

Figure 1. Integrating e-learning approaches for interactive teaching

- Figure 1 illustrates how a teacher integrates e-learning tools for interaction. Before the start of module, the teacher would post all the module materials into **Learning Management System (e.g. Moodle)** such that students can obtain module information. Then, in the class, the teacher facilitates the knowledge transfer with students. Students' knowledge would be strengthened by discussion and/or problem solving with the support of **Subject Software**. To achieve mass interaction, the teacher uses **Quick Response System** to collect students' feedbacks in real-time and deepen the knowledge. With the in-depth knowledge discussed in class, students are given the opportunity to revisit the online course and procedure of solving problems via **Massive Open Online Course (MOOC)** for the preparation of attending next class. An **Online Simulation Game** is also assigned for students to work on as a project. The score of the game would be part of module assessment. When students face difficulties to work on the project, they could seek consultation support from teachers. Hence, the roles of teacher have been transformed from lecturing into facilitation and consultation.

Timeframe

This practice has been implemented for more than two years.

Outcomes

The outcome of this practice is to transform the roles of teacher into a learning facilitator for students to learn new knowledge. The overall teaching and learning quality as reflected by the Students' Feedback on Modules collected by the College, showed positive results with an average score of 5.0+ on a 6-point scale. The online survey also revealed that most students (80%+) strongly agreed or

agreed that the e-learning tool enhanced their learning interests and effectiveness.

To implement the good practice successfully, it requires both top-down and bottom-up supports. From the top-down perspective, senior management supports in terms of information technology infrastructure, incentive policy and training workshops are also needed. On the other hand, from the bottom-up perspective, it is essential to identify innovative teachers and provide them with the opportunity. Most of the time, innovative teachers are self-motivated to contribute to such initiatives, when the organization recognizes their efforts.

Review and Continuous Improvement

The institution uses both quantitative and qualitative methods to evaluate the learning outcomes:

- An online survey was conducted to understand the students' opinions about massive open online course (MOOC) with simulation games.
- Student qualitative feedbacks were collected to supplement the survey findings and generated ideas for improvements (e.g. "Better server" and "More instruction would be better").

Resources

The resources required for successful implementation are mainly the cost of software and e-learning platforms. The amount of resource varies, due to the option of free open-source software and platforms. However, it should be noted that free open-source software lacks integration and customization which increases the administrative works for teachers and reduces their usage.

Challenges/Remarks

This practice enhances both teaching and learning quality, especially for those students who are active learners. However, it is also found that some students are not willing to spend time on self-learning outside the classroom, regardless of whether this is part of project assessment or not. For those students who prefer to listen in class, a mixed mode of teaching would be considered in the future.

Also, the e-learning approaches mentioned-above still have room for improvement in terms of efficiency and effectiveness:

- When adopting an e-learning approach, setup time may be a barrier for both teachers and students. For instance, when students participate in the feedback session by Quick Response System, it takes around ten minutes

for them to login through their mobile phone with QR code. Also, a better server and internet connection would enhance the effectiveness of e-learning tools.

- To design the workshop with a simulation game, a teacher could spend more than ten hours in preparation for a thirty minutes session.

Acknowledgement

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